UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,450	05/03/2001	Dang M. Ngo	2008-174	7214

22471 7590 12/23/2003

PATENT LEGAL DEPARTMENT/A-42-C
BECKMAN COULTER, INC.
4300 N. HARBOR BOULEVARD
BOX 3100
FULLERTON, CA 92834-3100

EXAMINER	
GORDON, BRIAN R	

ART UNIT	PAPER NUMBER
1743	

DATE MAILED: 12/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/848,450	NGO ET AL.	
	Examiner	Art Unit	
	Brian R. Gordon	1743	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10, 12, 14-26, 28, 30-41, 42 and 44* is/are rejected.

7)☒ Claim(s) *11,13,27,29,42 and 44* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 September 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4,5*.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1- 8, 14-24, 30-39, 45-47 rejected under 35 U.S.C. 102(e) as being anticipated by Kodama et al. US 6,599,749.

Kodama et al. discloses an automated analyzer device has a main conveyance line capable of conveying a sample rack holding a sample, a plurality of analysis units arranged along the main conveyance line, a rack supplying device for supplying the sample rack to the main conveyance line and a rack housing device for housing the sample rack conveyed by the main conveyance line. The automated analyzer includes a controller for confirming that there is no sample rack on the main conveyance line before the main conveyance line receives the sample rack from the rack supplying device. The controller controls operation of the main conveyance line so as to convey the sample rack received from the rack supplying device by the main conveyance line to

a position corresponding to a specific one of the plurality of analysis units by which the sample rack is to be received without stopping.

In FIG. 1, a control unit 1 **(electronic means)** for controlling operations of mechanisms in the automated analyzer includes a storage 81, a conveyance possible/impossible communicating unit 82, a conveyance instructing unit 83, and the like. Samples are conveyed to an analysis unit 100 and/or an analysis unit 200 on the basis of analysis request information inputted by an operation unit 2. Analysis results are collected from the analysis units and are outputted to a picture display 85 such as a CRT and a printer 86. The control unit 1 collects information as to whether each of the units can transmit or receive the sample rack or not by the conveyance possible/impossible communicating unit 82. When both of the reception and transmission states are satisfied, a timer in the control unit 1 is started and elapsed time of each conveyance path is stored in the storage. Each time the conveying process of a main conveyance line 13 is finished, the conveyance instructing unit 83 sends an instruction to convey the next sample rack to the selected conveyance path.

Analysis items requested to examine each sample, **a sample ID** for identifying the sample, and sample attribute information (sex, age, kind of sample, and the like) are inputted from the operating part 2. Each sample is analyzed with respect to the analysis items by the analysis units 100 and 200 on the basis of the instruction from the control unit 1. After that, the analysis results are outputted. In a rack supplying unit 3 into which a sample rack holding a sample is loaded, the user can place a plurality of sample

racks. The sample racks are supplied to the main conveyance line 13 in accordance with the placement order as a conveying process of the apparatus is advanced.

The main conveyance line 13 is controlled by the control unit 1 and conveys only one sample rack at a time. The sample rack subjected to a delivery process by the analysis units 100 and 200 is housed in a rack housing unit 5 **(off load section)** for housing a delivery-processed sample rack. Each analysis unit receives the sample rack from the main conveyance line 13, executes a delivering process, and returns the rack to the main conveyance line 13.

Each sample rack 9 has a plurality of holes as code information indicative of a **rack** number or a bar code label 75 on which a bar code is printed. The rack number identification information is read by a known reader. A magnetic record medium or the bar code label 77 is attached as a sample identification information medium on the outer wall of the sample vessel 76.

FIG. 2 is a diagram showing a construction of a part around the main conveyance line in the automated analyzer of FIG. 1. The rack supplying unit 3 has: a plurality of rack trays 11 and 12 (onload section) in which a plurality of sample racks 9 can be arranged in a specified direction; a conveyance path 6 for loading; and movable arms 61 and 62 (on load moving mechanism) for moving the sample racks on the rack trays to the conveyance path 6 for loading. One end of the conveyance path 6 for loading is adjacent to the main conveyance line 13 and serves as a transmission port 10 where the sample rack 9 is temporarily stopped before being carried by the main conveyance path 13. The other end of the conveyance path 6 for loading serves as an

urgent sample loading port 4 from which a sample rack for an urgent test is loaded. The sample rack loaded to the urgent sample loading port 4 is detected by a rack detector 33. A detection signal is transmitted to the control unit 1. The control unit 1 is programmed to convey the urgent test sample rack prior to other general sample racks from the rack trays 11 and 12. The rack trays 11 and 12 are detachable and can be replaced by other rack trays.

A sample rack pushed from the rack tray 11 to the conveyance path 6 for loading is detected by a rack detector 32. A sample rack pushed from the rack tray 12 to the conveyance path 6 for loading is detected by a rack detector 31 **(onload sensor)**. A rack moving device 14 having a movable hook 8 rotates or reciprocates a belt on which the movable hook 8 is attached to move the sample rack on the loading conveyance path 6 to the main conveyance line 13. Rack identification information or sample vessel identification information of the sample rack 9 positioned at the transmission port 10 is read by an identification information reader 50 such as a bar code reader and the sample ID is recognized by the control unit 1. The kinds of analysis items which can be analyzed by analysis units are registered in the storage 81 of the control unit 1. Which one of the analysis units 100 and 200 analyzes the sample on the sample rack 9 is determined by the control unit 1 in accordance with the recognition of the sample ID and a reception port for receiving the relevant sample rack 9 is decided.

The rack housing unit 5 **(offload section)** has: a plurality of rack trays 20 and 21 which can house a number of sample racks by arranging them in a specific direction; a conveyance path 7 for housing; and pushing devices 23 and 24 **(offload moving**

mechanisms) for pushing the sample rack on the conveyance path 7 to the rack trays. The main conveyance line 13 side of the housing conveyance path 7 has a reception port 22 for receiving the sample rack from the main conveyance line. Arrival of the sample rack at the reception port 22 is detected by a rack detector 56. A rack moving device 28 conveys the sample rack at the reception port 22 to a place in front of the rack tray 20 or 21 and has a construction similar to that of the rack moving device 14. Rack detectors 38 and 39 **(offload sensors)** detect that the rack trays 20 and 21 are filled with racks.

The delivery processing area 71 provided between the main conveyance line 13 and the reaction part of the analysis unit 100 and a delivery processing area 72 provided between the main conveyance line 13 and the reaction part of the analysis unit 200 have similar constructions. The main conveyance line 13 is constructed by a single belt rotated in a predetermined direction by a pulse motor as a driving source and can change a movement distance of the sample rack according to the number of pulses given to the driving source. A plurality of rack detectors are arranged along the main conveyance line 13. A rack detector 51 detects that the sample rack rides on the main conveyance line. Rack detectors 34 and 36 detect **(presentation sensor)**the sample rack for being transferred to the delivery processing areas 71 and 72. Rack detectors 35 and 37 detect that the sample rack is transferred from the delivery processing areas 71 and 72 to the main conveyance line 13.

The delivery processing areas **(presentation sections)** 71 and 72 have reception ports 16a and 16b of the sample rack, delivery ports 17a and 17b, and

transmission ports 18a and 18b of the sample rack which correspond each other, respectively. Rack detectors 52 and 54 detect that the reception ports 16a and 16b receive the sample racks, respectively. Rack detectors 53 and 55 detect arrival of the sample racks at the transmission ports 18a and 18b. Rack transfer devices **(transfer area with presentation moving mechanisms)** 25a and 25b are mechanisms for transferring the sample racks at the reception ports 16a and 16b to the delivery ports 17a and 17b. Rack transfer devices 26a and 26b are mechanisms for transferring the sample racks at the delivery ports 17a and 17b to the transmission ports 18a and 18b. Each of the rack transfer devices has a construction such that a belt to which a movable hook is attached for pushing and moving the sample rack is wound around the shaft of the motor and a pulley and the belt is rotated or reciprocated.

Sample transfer mechanisms 15a and 15b transfer the sample racks stopped on the main conveyance line 13 to the reception ports 16a and 16b of the delivery processing areas 71 and 72. Sample transfer mechanisms 19a and 19b transfer the sample racks at the transmission ports 18a and 18b of the delivery processing areas 71 and 72 to the main conveyance line 13. These sample transfer mechanisms have the same construction except the direction of transferring the sample racks is different. As a sample transfer mechanism, a pickup robot or a sample rack pushing mechanism can be used

3. Claims 1- 8, 14-24, 30-39, 45-47 rejected under 35 U.S.C. 102(e) as being anticipated by Sakazume et al., US 6,444,171.

Sakazume et al. discloses a sample processing system which can process a lot of samples efficiently and continuously, and also can minimize a waiting time for an emergency sample that must be processed urgently.

The device comprises two rack trays 151 and 152 (onload sections) are removably installed in a ordinary sample inlet unit 40. A many number of sample racks 2 which are arranged in order can be accommodated in each rack tray. A sample rack 2 on each rack tray can be pushed (moving mechanism –pushers) forward to a supply line 47 one by one by a lever 351 or 352 which is movable in horizontal directions actuated by a lever actuator 41 or 42. Sample rack 2 in an example of FIG. 1 is a box-type container holder that holds five test sample containers, however, the type of sample rack 2 and the number of test sample containers are not limited thereto, and many other types and modifications which can hold more than one sample containers and can be conveyed on a conveyer line can be contemplated within the scope of the invention.

In a system of FIG. 1, three different analysis units are arranged as sample processing units between the ordinary sample inlet unit 40 and a rack collection unit 60 (offload section).

Rack collection unit 60 accommodates in its rack tray 161 or 162 the sample rack 2 conveyed thereto having samples which were processed. The sample rack arriving at a collection line 61 of rack collection unit 60 is positioned at an entry to rack trays 161 or 162 by a rack transfer unit 360 which is actuated by a belt drive, then pushed into a

corresponding rack tray by a rack pusher 361 or 362 (offload moving mechanisms-pushers).

The rack conveyer line is comprised of supply line 47, a first conveyer line 51 (presentation moving mechanism), a second conveyer line 52, and collection line 61. The first conveyer line 51 positions a first sample container on the sample rack delivered from the supply line 47 at a sample sucking or sampling position 221 (presentation section), moves the sample rack forward corresponding to each one of the sample containers with a progress of pipetting operation by sample pipetter 181, and then, after confirmation of completion of pipetting of the final sample container at sampling completion position 222, delivers the same via an intermediate position 223 to be positioned at a delivery position 224 through which to be delivered to a by-pass line 21 in analysis unit 20. Transfer of the sample rack on the first conveyer line 51 is accomplished by pushing forward the tail end of the sample rack thereon by a rack transfer unit 320 which is driven by the belt drive.

The second conveyer line 52 can convey the sample rack from a rack receiving position 251 at which sample rack 2 is received from the first conveyer line 51 to a next analysis unit via a rack receiving position 252 at which the sample is received from a by-pass line 21 of analysis unit 20, a rack delivery position (presentation section) 253 at which the sample is delivered to a by-pass line 31 of analysis unit 30, a rack receiving position 254 for receiving the sample rack from by-pass line of analysis unit 30 and the like. Transfer of the sample rack on the second conveyer line is accomplished by a rack

transfer unit 350 which is driven by the belt drive and pushes forward the tail end of the sample rack.

A plurality of rack detectors 291-297 are disposed along the supply line 47, and each of these rack detectors corresponds to each of positions 211-217 on the supply line 47. Namely, a sample rack at emergency sample receiving position 211 is detected by rack detector 291 (onload sensor), a sample rack arriving at intermediate position 212 is detected by rack detector 292, a sample rack pushed forward from rack tray 152 to receiving position 213 is detected by rack detector 293, a sample rack pushed forward from rack tray 151 to receiving position 214 is detected by rack detector 294 (onload sensor), a sample rack arriving at a read position 215 of ID information reader 171 is detected by rack detector 295, a sample rack positioned at intermediate position 216 is detected by rack detector 296, and a sample rack arriving at a delivery position 217 to the first conveyer line is detected by rack detector 297, respectively.

A belt drive unit 48 has an endless belt stretched between a drive pulley connected to a drive power source and another pulley. A rack transfer device 310 is fixed to this endless belt. An arm of the rack transfer device 310 can rotate a predetermined angle in a forward direction. In case of pushing the tail end of sample rack 2a as in FIG. 2(A), its rotation is prevented, however, in case where the rack transfer device 310 moves backward (return) relative to the sample rack which is advancing from rack detector 291 on the side of the emergency sample inlet unit to rack detector 297 at delivery position 217 to the first conveyor line 51 as indicated in FIG. 2(C), the arm thereof becomes rotatable thereby allowing the rack transfer device to

return without affecting the motion of the sample rack. Other rack transfer devices in FIG. 1 have the same arrangement as described above.

(As shown in FIG. 2(A), suppose that a ordinary sample rack 2a is pushed from rack tray 152 to receiving position 213, upon detection thereof by rack detector 293 (onload sensor), rack transfer device 310 moves the ordinary sample rack 2a to the position of rack detector 297 by pushing forward the tail end of the sample rack 2a, as indicated in FIG. 2(B). Then, suppose that another ordinary sample rack 2b is pushed out from rack tray 152 onto supply line 47, and immediately after that, an emergency sample rack 2c is introduced into emergency sample inlet unit 45. In this case, the ordinary sample rack 2b is sensed by rack detector 293, and immediately after that, the emergency sample rack 2c is sensed by rack detector 291. Thereby, the rack transfer device 310 is caused to return from the state of FIG. 2(C) to a start end position of supply line 47 so as to move the emergency sample rack 2c by pushing the tail end thereof. Further, as indicated in FIG. 2(D), the rack transfer device 310 moves forward both the ordinary sample rack 2b and the emergency sample rack 2c, then stops its pushing operation in response to a signal that the ordinary sample rack 2b is sensed by rack detector 294.

The third analysis unit 30, although differs from the second analysis unit in the method of supplying reagents, is the same in the method of measurement of reaction solutions. Its sample pipetting device 183 having a pipette nozzle aspirates (presentation section) a part of the sample into its pipette nozzle from the sample rack positioned at sample pipetting position 244 on by-pass line 31, and discharges the part

of the sample in the pipette nozzle into one of the plurality of reaction containers 33 arranged on the reaction disk 189. A many number of reagent bottles are disposed on reagent turn table 188, and a preferred reagent is aspirated therefrom by reagent pipetting mechanism 186 having a reagent pipette nozzle to be discharged into reaction container 33. A reaction solution resulting from the reaction between the sample and the reagent in the reaction container is measured its optical properties by an optical photometer disposed along reaction disk 189, and concentrations of respective analysis items related to the sample are computed.

The second analysis unit 20 and the third analysis unit 30 are provided with built-in type by-pass lines 21, 31 of the same construction. Further, these analysis units 20, 30 have sample rack transfer devices 371, 372, 381, 382. A sample rack arriving at delivery positions 224, 253 to each analysis unit is moved over to rack reception positions 231, 241 on by-pass line 21, 31 by transfer devices 371, 381. Further, the sample rack after completing its pipetting processing is transferred from delivery positions 236, 246 on by-pass lines 21, 31 to rack reception positions 252, 254 on the second conveyer line 52 by transfer devices 372, 382.

The analysis unit control section 15 is a computer which controls the operation of the first analysis unit 10 and executes arithmetic operation of measured data. An analysis unit control section 25 is a computer which controls the operation of the second analysis unit 20 and executes arithmetic operation of measured data. An analysis unit control section 35 is a computer which controls the operation of the third analysis unit 30 and executes arithmetic operation of measured data. Further, a conveyor line control

section 55 is a computer which controls the transfer operation of each sample rack on the basis of judgment of a rack detection signal in the ordinary sample inlet section 40, emergency sample inlet section 45, supply line 47, first conveyor line 51, second conveyor line 52 and rack collection section 60, and by controlling respective operations of each rack transfer device, the movable lever, and the rack pushing device. Still further, master control section 70 is a computer which supervises three analysis control sections and the transfer line control section so as to ensure that the system operates smoothly (electronic means).

A bar code reader 171 which is an ID (identification) information reader disposed along the supply line 47 reads out a rack ID and/or sample ID of the sample rack which is positioned at read-out position 215, and transmits a result of its read-out operation to the transfer line controller (computer) 55. On the basis of this information transmitted, process contents for a corresponding sample rack are determined specifically, and particular analysis units to which the sample rack must be transferred and analysis items of each sample requiring specific pipetting are registered in a memory of the control section.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 9-10, 12, 25-26, 28, 40-41, 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kodama et al. US 6,599,749.

Kodama et al. teach a process in which fluid is removed from the individual tubes in the racks. The sample rack taken by the analysis unit 200 is transferred to the delivery port 17b by the hook of the rack transfer device 25b and the sample is delivered by the sample delivery device 204. Since the sample rack for holding five test tubes is used in the example, the contents of the sample are delivered from the test

tubes to the reaction vessels arranged on the circumference of the reaction disk 203 one by one by the operation of the delivery nozzle. While the reagent of the reagent house 201 is delivered by the reagent delivery mechanism 202, the reaction is progressed and the analysis of the desired item is executed. The sample rack whose contents were delivered to the reaction vessels is carried to the transmission port 18b and gives the delivery port 17b to the sample rack to be carried next. At this point of time, the analysis unit 200 sends a conveyance is request to the main conveyance line 13 and waits for the transmission permission. When the transmission is permitted, the sample rack is transferred from the transmission port 18b to the main conveyance line 13 by the sample transfer mechanism 19b and moves to the exit of the main conveyance line, that is, the reception port 22 of the rack housing unit 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that the during the process of delivering a sample from each of the tubes in the rack that the rack must be precisely aligned in order for the nozzle to be inserted into the tubes.

8. Claims 9-10, 12, 25-26, 28, 40-41, 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakazume et al., US 6,444,171.

Sakazume et al. teaches that the third analysis unit 30, although differs from the second analysis unit in the method of supplying reagents, is the same in the method of measurement of reaction solutions. Its sample pipetting device 183 having a pipette nozzle aspirates (presentation section) a part of the sample into its pipette nozzle from the sample rack positioned at sample pipetting position 244 on by-pass line 31, and

discharges the part of the sample in the pipette nozzle into one of the plurality of reaction containers 33 arranged on the reaction disk 189. A many number of reagent bottles are disposed on reagent turn table 188, and a preferred reagent is aspirated therefrom by reagent pipetting mechanism 186 having a reagent pipette nozzle to be discharged into reaction container 33. A reaction solution resulting from the reaction between the sample and the reagent in the reaction container is measured its optical properties by an optical photometer disposed along reaction disk 189, and concentrations of respective analysis items related to the sample are computed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to recognize that the during the process of aspirating a sample from each of the tubes in the rack that the rack must be precisely aligned in order for the pipetting device to be inserted into the tubes.

Allowable Subject Matter

9. Claims 11, 13, 27, 29, 42, and 44 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art of record does not teach nor fairly suggest a device comprising a lengthwise direction precise positioning means comprising a spring-biased plunger engageable with said presented sample rack nor a traverse direction precise positioning means comprising a lead-in slot engagable with an engagement feature of said sample presented rack.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sharpe, Jr. et al., Comte et al., Michel et al., Tamura et al., Shiba et al., Schinzel, Cohen et al. (,259 ; ,044 ; and ,368) Jokes et al., Fukuzuno et al., Mimura et al., (,521 ; ,364 ; and ,549), Sakazume et al., Hanawa et al. ,392, Ohishi et al., Seaton et al., Uematsu et al., Shu et al., Wakatake, and Kanamori et al. disclose automated analyzers and mechanical transport systems for racks and magazines.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Gordon whose telephone number is (703) 305-0399. The examiner can normally be reached on M-F, with 2nd and 4th F off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 703-308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Jill Warden
Supervisory Patent Examiner
Technology Center 1700

brg